

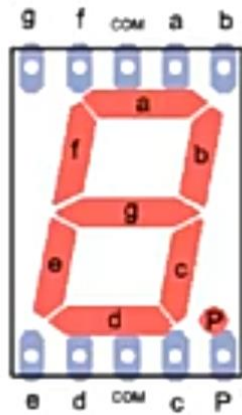


Electrónica II,

FICHA TÉCNICA	
ESCUELA:	Universidad Del Sureste
CARRERA:	Ingeniería en Sistemas Computacionales
ALUMNO(A):	Jirem Madali Jiménez Trejo
CUATRIMESTRE:	6to
MATERIA:	Electrónica II
MÓDULO:	Iero
TEMA:	Display de 7 Segmentos



PRACTICA



MATERIALES:

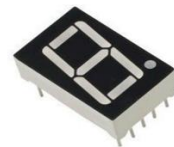
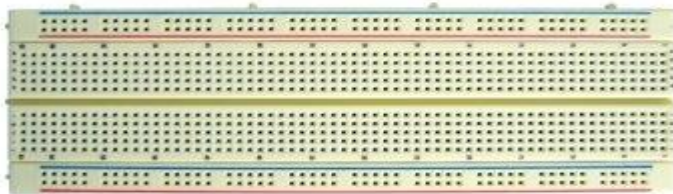
I Placa Arduino Uno

I Protoboard

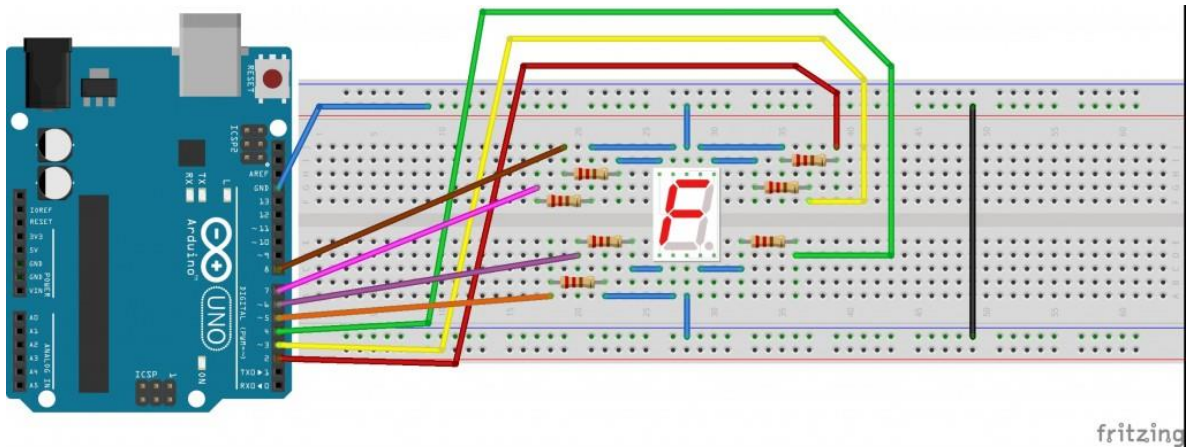
Cables macho-macho

Resistencias de 220 ohms

I Display de 7 Segmentos de Cátodo común



ESQUEMA EN FRITZING



FORMA TODA LA NUMERACION CODIGO

```
void setup() {
```

```
  // put your setup code here, to run once:
```

```
  const int a = 2;  
  const int b = 3;  
  const int c = 4;  
  const int d = 5;  
  const int e = 6;  
  const int f = 7;  
  const int g = 8;
```

```
//Funciones para dibujar del 0 al 9 en el display de 7 segmentos
```

```
//Funciones para el 0
```

```
void cero () {  
  digitalWrite (a, HIGH);  
  digitalWrite (b, HIGH);  
  digitalWrite (c, HIGH);  
  digitalWrite (d, HIGH);  
  digitalWrite (e, HIGH);  
  digitalWrite (f, HIGH);  
  digitalWrite (g, LOW);  
  delay(750);  
}
```

```
//Funciones para el 1
```

```
void uno () {  
digitalWrite (a, LOW) ;  
digitalWrite (b, HIGH) ;  
digitalWrite (c, HIGH) ;  
digitalWrite (d, LOW) ;  
digitalWrite (e, LOW) ;  
digitalWrite (f, LOW) ;  
digitalWrite (g, LOW) ;  
delay(750);  
}
```

```
//Funciones para el 2
```

```
void dos () {  
digitalWrite (a, HIGH) ;  
digitalWrite (b, HIGH) ;  
digitalWrite (c, LOW) ;  
digitalWrite (d, HIGH) ;  
digitalWrite (e, HIGH) ;  
digitalWrite (f, LOW) ;  
digitalWrite (g, HIGH) ;  
delay(750);  
}
```

```
void dos () {  
digitalWrite (a, HIGH) ;  
digitalWrite (b, HIGH) ;  
digitalWrite (c, LOW) ;  
digitalWrite (d, HIGH) ;  
digitalWrite (e, HIGH) ;  
digitalWrite (f, LOW) ;  
digitalWrite (g, HIGH) ;  
delay(750);  
}
```

```
//Funciones para el 3
```

```
void tres () {  
digitalWrite (a, HIGH) ;  
digitalWrite (b, HIGH) ;  
digitalWrite (c, HIGH) ;  
digitalWrite (d, LOW) ;  
digitalWrite (e, LOW) ;  
digitalWrite (f, LOW) ;  
digitalWrite (g, HIGH) ;  
delay(750);  
}
```

```
void tres () {  
  digitalWrite (a, HIGH);  
  digitalWrite (b, HIGH);  
  digitalWrite (c, HIGH);  
  digitalWrite (d, LOW);  
  digitalWrite (e, LOW);  
  digitalWrite (f, LOW);  
  digitalWrite (g, HIGH);  
  delay(750);  
}
```

```
void tres () {  
  digitalWrite (a, HIGH);  
  digitalWrite (b, HIGH);  
  digitalWrite (c, HIGH);  
  digitalWrite (d, LOW);  
  digitalWrite (e, LOW);  
  digitalWrite (f, LOW);  
  digitalWrite (g, HIGH);  
  delay(750);  
}
```

//Funciones para el 4

```
void cuatro () {  
  digitalWrite (a, LOW);  
  digitalWrite (b, HIGH);  
  digitalWrite (c, HIGH);  
  digitalWrite (d, LOW);  
  digitalWrite (e, LOW);  
  digitalWrite (f, HIGH);  
  digitalWrite (g, HIGH);  
  delay(750);  
}
```

```
void cuatro () {  
  digitalWrite (a, LOW);  
  digitalWrite (b, HIGH);  
  digitalWrite (c, HIGH);  
  digitalWrite (d, LOW);  
  digitalWrite (e, LOW);  
  digitalWrite (f, HIGH);  
  digitalWrite (g, HIGH);  
  delay(750);  
}
```

```
void cuatro () {  
  digitalWrite (a, LOW) ;  
  digitalWrite (b, HIGH) ;  
  digitalWrite (c, HIGH) ;  
  digitalWrite (d, LOW) ;  
  digitalWrite (e, LOW) ;  
  digitalWrite (f, HIGH) ;  
  digitalWrite (g, HIGH) ;  
  delay(750);  
}
```

```
void cuatro () {  
  digitalWrite (a, LOW) ;  
  digitalWrite (b, HIGH) ;  
  digitalWrite (c, HIGH) ;  
  digitalWrite (d, LOW) ;  
  digitalWrite (e, LOW) ;  
  digitalWrite (f, HIGH) ;  
  digitalWrite (g, HIGH) ;  
  delay(750);  
}
```

//Funciones para el 5

```
void cinco () {  
  digitalWrite (a, HIGH) ;  
  digitalWrite (b, LOW) ;  
  digitalWrite (c, HIGH) ;  
  digitalWrite (d, HIGH) ;  
  digitalWrite (e, LOW) ;  
  digitalWrite (f, HIGH) ;  
  digitalWrite (g, HIGH) ;  
  delay(750);  
}
```

```
void cinco () {  
  digitalWrite (a, HIGH) ;  
  digitalWrite (b, LOW) ;  
  digitalWrite (c, HIGH) ;  
  digitalWrite (d, HIGH) ;  
  digitalWrite (e, LOW) ;  
  digitalWrite (f, HIGH) ;  
  digitalWrite (g, HIGH) ;  
  delay(750);  
}
```

```
void cinco () {  
  digitalWrite (a, HIGH) ;  
  digitalWrite (b, LOW) ;
```

```
digitalWrite (c, HIGH) ;
digitalWrite (d, HIGH) ;
digitalWrite (e, LOW) ;
digitalWrite (f, HIGH) ;
digitalWrite (g, HIGH) ;
delay(750);
}
void cinco () {
digitalWrite (a, HIGH) ;
digitalWrite (b, LOW) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, HIGH) ;
digitalWrite (e, LOW) ;
digitalWrite (f, HIGH) ;
digitalWrite (g, HIGH) ;
delay(750);
}
void cinco () {
digitalWrite (a, HIGH) ;
digitalWrite (b, LOW) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, HIGH) ;
digitalWrite (e, LOW) ;
digitalWrite (f, HIGH) ;
digitalWrite (g, HIGH) ;
delay(750);
}
```

//Funciones para el 6

```
void seis () {
digitalWrite (a, HIGH) ;
digitalWrite (b, LOW) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, HIGH) ;
digitalWrite (e, HIGH) ;
digitalWrite (f, HIGH) ;
digitalWrite (g, HIGH) ;
delay(750);
}
void seis () {
digitalWrite (a, HIGH) ;
digitalWrite (b, LOW) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, HIGH) ;
digitalWrite (e, HIGH) ;
digitalWrite (f, HIGH) ;
```

```
digitalWrite (g, HIGH) ;  
delay(750);  
}  
void seis () {  
digitalWrite (a, HIGH) ;  
digitalWrite (b, LOW) ;  
digitalWrite (c, HIGH) ;  
digitalWrite (d, HIGH) ;  
digitalWrite (e, HIGH ;  
digitalWrite (f, HIGH ;  
digitalWrite (g, HIGH) ;  
delay(750);  
}  
void seis () {  
digitalWrite (a, HIGH) ;  
digitalWrite (b, LOW) ;  
digitalWrite (c, HIGH) ;  
digitalWrite (d, HIGH) ;  
digitalWrite (e, HIGH ;  
digitalWrite (f, HIGH ;  
digitalWrite (g, HIGH) ;  
delay(750);  
}  
void seis () {  
digitalWrite (a, HIGH) ;  
digitalWrite (b, LOW) ;  
digitalWrite (c, HIGH) ;  
digitalWrite (d, HIGH) ;  
digitalWrite (e, HIGH ;  
digitalWrite (f, HIGH ;  
digitalWrite (g, HIGH) ;  
delay(750);  
}
```


//Funciones para el 7

```
void siete () {  
  digitalWrite (a, HIGH);  
  digitalWrite (b, HIGH);  
  digitalWrite (c, HIGH);  
  digitalWrite (d, LOW);  
  digitalWrite (e, LOW);  
  digitalWrite (f, LOW);  
  digitalWrite (g, LOW);  
  delay(750);  
}
```

```
void siete () {  
  digitalWrite (a, HIGH);  
  digitalWrite (b, HIGH);  
  digitalWrite (c, HIGH);  
  digitalWrite (d, LOW);  
  digitalWrite (e, LOW);  
  digitalWrite (f, LOW);  
  digitalWrite (g, LOW);  
  delay(750);  
}
```

```
void siete () {  
  digitalWrite (a, HIGH);  
  digitalWrite (b, HIGH);  
  digitalWrite (c, HIGH);  
  digitalWrite (d, LOW);  
  digitalWrite (e, LOW);  
  digitalWrite (f, LOW);  
  digitalWrite (g, LOW);  
  delay(750);  
}
```

```
void siete () {  
  digitalWrite (a, HIGH);  
  digitalWrite (b, HIGH);  
  digitalWrite (c, HIGH);  
  digitalWrite (d, LOW);  
  digitalWrite (e, LOW);  
  digitalWrite (f, LOW);  
  digitalWrite (g, LOW);  
  delay(750);  
}
```

```
void siete () {  
  digitalWrite (a, HIGH);  
  digitalWrite (b, HIGH);  
  digitalWrite (c, HIGH);  
  digitalWrite (d, LOW);  
}
```

```
digitalWrite (e, LOW) ;
digitalWrite (f, LOW) ;
digitalWrite (g, LOW) ;
delay(750);
}
void siete () {
digitalWrite (a, HIGH) ;
digitalWrite (b, HIGH) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, LOW) ;
digitalWrite (e, LOW) ;
digitalWrite (f, LOW) ;
digitalWrite (g, LOW) ;
delay(750);
}
void siete () {
digitalWrite (a, HIGH) ;
digitalWrite (b, HIGH) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, LOW) ;
digitalWrite (e, LOW) ;
digitalWrite (f, LOW) ;
digitalWrite (g, LOW) ;
delay(750);
}
```

//Funciones para el 8

```
void ocho () {
digitalWrite (a, HIGH) ;
digitalWrite (b, HIGH) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, HIGH) ;
digitalWrite (e, HIGH) ;
digitalWrite (f, HIGH) ;
digitalWrite (g, HIGH) ;
delay(750);
}
void ocho () {
digitalWrite (a, HIGH) ;
digitalWrite (b, HIGH) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, HIGH) ;
digitalWrite (e, HIGH) ;
digitalWrite (f, HIGH) ;
digitalWrite (g, HIGH) ;
delay(750);
}
```

```
}  
void ocho () {  
digitalWrite (a, HIGH);  
digitalWrite (b, HIGH);  
digitalWrite (c, HIGH);  
digitalWrite (d, HIGH);  
digitalWrite (e, HIGH);  
digitalWrite (f, HIGH);  
digitalWrite (g, HIGH);  
delay(750);  
}  
void ocho () {  
digitalWrite (a, HIGH);  
digitalWrite (b, HIGH);  
digitalWrite (c, HIGH);  
digitalWrite (d, HIGH);  
digitalWrite (e, HIGH);  
digitalWrite (f, HIGH);  
digitalWrite (g, HIGH);  
delay(750);  
}  
void ocho () {  
digitalWrite (a, HIGH);  
digitalWrite (b, HIGH);  
digitalWrite (c, HIGH);  
digitalWrite (d, HIGH);  
digitalWrite (e, HIGH);  
digitalWrite (f, HIGH);  
digitalWrite (g, HIGH);  
delay(750);  
}  
void ocho () {  
digitalWrite (a, HIGH);  
digitalWrite (b, HIGH);  
digitalWrite (c, HIGH);  
digitalWrite (d, HIGH);  
digitalWrite (e, HIGH);  
digitalWrite (f, HIGH);  
digitalWrite (g, HIGH);  
delay(750);  
}  
void ocho () {  
digitalWrite (a, HIGH);  
digitalWrite (b, HIGH);  
digitalWrite (c, HIGH);  
digitalWrite (d, HIGH);  
digitalWrite (e, HIGH);
```

```
digitalWrite (f, HIGH) ;
digitalWrite (g, HIGH) ;
delay(750);
}
void ocho () {
digitalWrite (a, HIGH) ;
digitalWrite (b, HIGH) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, HIGH) ;
digitalWrite (e, HIGH) ;
digitalWrite (f, HIGH) ;
digitalWrite (g, HIGH) ;
delay(750);
}
```

//Funciones para el 9

```
void nueve (){
digitalWrite (a, HIGH) ;
digitalWrite (b, HIGH) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, LOW) ;
digitalWrite (e, LOW) ;
digitalWrite (f, HIGH) ;
digitalWrite (g, HIGH) ;
delay(750);
}
void nueve (){
digitalWrite (a, HIGH) ;
digitalWrite (b, HIGH) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, LOW) ;
digitalWrite (e, LOW) ;
digitalWrite (f, HIGH) ;
digitalWrite (g, HIGH) ;
delay(750);
}
void nueve (){
digitalWrite (a, HIGH) ;
digitalWrite (b, HIGH) ;
digitalWrite (c, HIGH) ;
digitalWrite (d, LOW) ;
digitalWrite (e, LOW) ;
digitalWrite (f, HIGH) ;
digitalWrite (g, HIGH) ;
delay(750);
}
```

```
void nueve (){  
digitalWrite (a, HIGH);  
digitalWrite (b, HIGH);  
digitalWrite (c, HIGH);  
digitalWrite (d, LOW);  
digitalWrite (e, LOW);  
digitalWrite (f, HIGH);  
digitalWrite (g, HIGH);  
delay(750);  
}
```

```
void nueve (){  
digitalWrite (a, HIGH);  
digitalWrite (b, HIGH);  
digitalWrite (c, HIGH);  
digitalWrite (d, LOW);  
digitalWrite (e, LOW);  
digitalWrite (f, HIGH);  
digitalWrite (g, HIGH);  
delay(750);  
}
```

```
void nueve (){  
digitalWrite (a, HIGH);  
digitalWrite (b, HIGH);  
digitalWrite (c, HIGH);  
digitalWrite (d, LOW);  
digitalWrite (e, LOW);  
digitalWrite (f, HIGH);  
digitalWrite (g, HIGH);  
delay(750);  
}
```

```
void nueve (){  
digitalWrite (a, HIGH);  
digitalWrite (b, HIGH);  
digitalWrite (c, HIGH);  
digitalWrite (d, LOW);  
digitalWrite (e, LOW);  
digitalWrite (f, HIGH);  
digitalWrite (g, HIGH);  
delay(750);  
}
```

```
void nueve (){  
digitalWrite (a, HIGH);  
digitalWrite (b, HIGH);  
digitalWrite (c, HIGH);  
digitalWrite (d, LOW);  
digitalWrite (e, LOW);  
digitalWrite (f, HIGH);
```

```
digitalWrite (g, HIGH) ;  
delay(750);  
}  
void nueve () {  
digitalWrite (a, HIGH) ;  
digitalWrite (b, HIGH) ;  
digitalWrite (c, HIGH) ;  
digitalWrite (d, LOW) ;  
digitalWrite (e, LOW) ;  
digitalWrite (f, HIGH) ;  
digitalWrite (g, HIGH) ;  
delay(750);  
}
```

```
void setup() {
```

```
  //2.- Definir el pin del segmento como salida a la placa
```

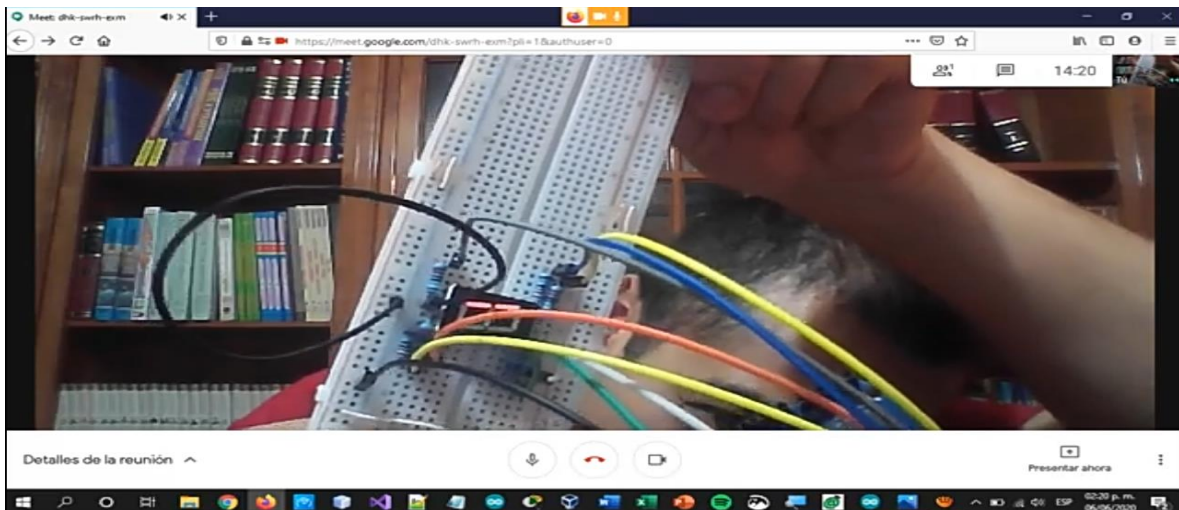
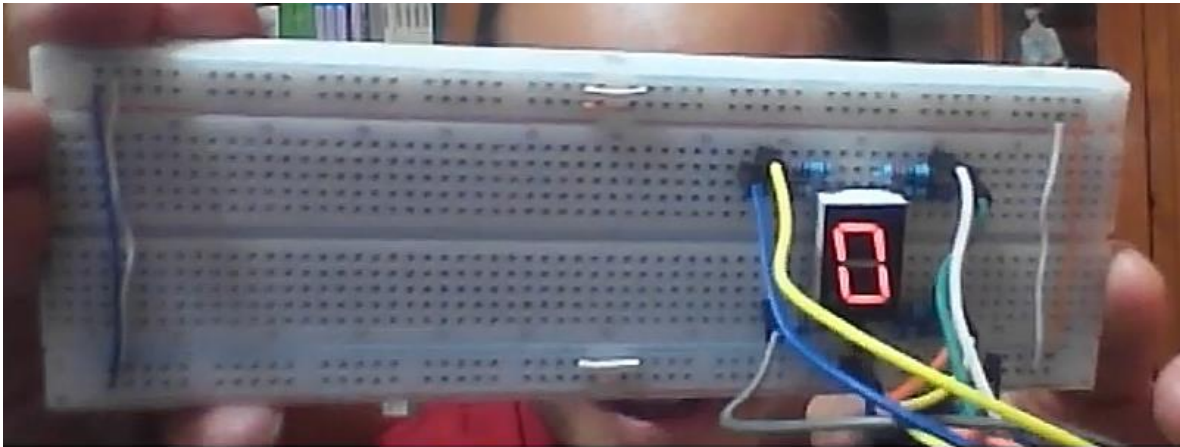
```
  pinMode (a, OUTPUT);  
  pinMode (b, OUTPUT);  
  pinMode (c, OUTPUT);  
  pinMode (d, OUTPUT);  
  pinMode (e, OUTPUT);  
  pinMode (f, OUTPUT);  
  pinMode (g, OUTPUT);  
}
```

```
void loop() {
```

```
  //3. Encender los segmentos necesarios
```

```
  cero();  
  uno();  
  dos();  
  tres();  
  cuatro();  
  cinco();  
  seis();  
  siete();  
  ocho();  
  nueve();  
}
```

RESULTADO



Estas prácticas son muy importantes realizarlas ya que aprendes a manejar el programa arduino, un protoboar y a conocer los códigos y su importancia que tienen.

Desafortunadamente no se puede realizar bien la práctica por falta de material. Pero es sorprendente lo mucho que se puede hacer.